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Advantages and Challenges of Digital Payment Usage in Everyday Transactions

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Abstract

This study examines the advantages and challenges of digital payment usage in everyday transactions, focusing on how benefits such as convenience, speed, and accessibility are balanced against barriers like security concerns, lack of trust, and technical issues. It investigates the influence of trust, perceived convenience, and financial literacy on adoption rates. A quantitative, cross-sectional survey-based design was adopted, with data collected from 100 respondents in Bangalore through convenience and snowball sampling. A structured questionnaire captured demographics, usage patterns, perceived advantages, challenges, and influencing factors. The data was analysed using descriptive statistics, correlation, and multiple regression to explore relationships between user perceptions and adoption. Findings reveal high adoption, particularly among younger users, with UPI and mobile wallets being the most preferred methods. Top advantages include convenience (92%), faster transactions (88%), and 24/7 accessibility (85%), while major barriers are security concerns (72%) and technical glitches (50%). The study also notes a steady rise in adoption from 72% in 2018 to 94% in 2023. The results confirm that trust, convenience, and financial literacy significantly drive adoption, whereas security concerns hinder it. Overall, the study concludes that the sustained growth of digital payments depends on enhanced security, improved reliability, expanded merchant acceptance, and increased user literacy.

Keywords: Digital Payments, UPI, Mobile Wallets, Trust, Convenience, Financial Literacy, Adoption Rate

1. Introduction

Digital payment systems refer to electronic methods of transferring money for goods and services, including mobile wallets, online banking, and card payments. These systems have grown exponentially in recent years, becoming an integral part of daily transactions worldwide. For example, the total value of digital payments was estimated at \$6.6 trillion in 2021 and is projected to reach \$10.5 trillion by 2025 (The Importance of Digital Payments - Horasis). This growth has been accelerated by technological advances (such as smartphones and the internet) and recent global events like the COVID-19 pandemic, which drove many consumers and businesses to adopt contactless and online payment methods (The Importance of Digital Payments - Horasis). According to the World Bank's Global Findex database, two-thirds of adults worldwide now make or receive a digital payment, a significant increase in adoption over the past decade (COVID-19 Drives Global Surge in use

of Digital Payments). This trend underscores the *growing importance of digital payment systems* in modern economies.

Despite their rapid rise, digital payments pose new questions and challenges. This research addresses the problem of understanding how the advantages offered by digital payments balance against the challenges that hinder their use in everyday transactions. The objectives of the study are:

- To identify the key advantages of using digital payments for consumers in routine transactions (such as convenience, cost savings, and efficiency gains).
- To examine the major challenges and barriers faced by users in adopting digital payments (such as security concerns, lack of trust, or access issues).
- To analyse factors influencing adoption, including technological, personal, and policy-related variables, in order to understand their impact on usage behavior.

The significance of digital payments is multi-faceted. For consumers, digital payments offer unprecedented convenience – allowing purchases anytime and anywhere – and often faster checkout compared to cash. They also provide benefits like easier expense tracking and access to online commerce. For businesses, digital payments can reduce the costs and risks associated with handling cash, expand customer reach (e.g. enabling e-commerce and remote sales), and improve transaction speed and record-keeping (Top 6 Benefits of Digital Payments for Businesses in 2025) (Top 6 Benefits of Digital Payments for Businesses in 2025). For economies and society at large, the shift to digital payments promotes financial inclusion by bringing unbanked populations into the formal financial system (The Importance of Digital Payments - Horasis). It also increases transparency in transactions and can boost economic activity by streamlining payments. Governments and financial institutions see digital payments as a driver of innovation and efficiency in the financial sector. In summary, understanding the advantages and challenges of digital payment usage is crucial for harnessing its benefits while mitigating its risks, thereby informing consumers, businesses, and policymakers alike.

In addition to the benefits and challenges mentioned, the rise of digital payment systems also fosters opportunities for innovation and competition within the financial ecosystem. Fintech companies are capitalizing on the demand for seamless and secure payment methods, introducing new technologies like blockchain, artificial intelligence, and biometric authentication to enhance the security and convenience of digital transactions. This has led to a proliferation of mobile payment solutions, peer-to-peer (P2P) payment platforms, and even cryptocurrencies, which offer decentralized alternatives to traditional payment methods.

As digital payments continue to evolve, they have the potential to further disrupt traditional banking models, reduce the dominance of cash-based economies, and drive financial inclusion on a global scale. However, these innovations also bring regulatory challenges, as governments and financial institutions work to ensure the integrity of the payment systems, safeguard user data, and address issues of fraud, money laundering, and cyberattacks. Therefore, while digital payments offer significant promise, they also require ongoing attention to regulatory frameworks and consumer protection measures to ensure a balanced, secure, and inclusive financial landscape.

2. Literature Review

Digital payments have played a significant role in enhancing financial inclusion, especially in developing

countries like India. **Sharma and Gupta (2020)** examine how digital payment platforms have made financial services more accessible to the unbanked population. Their research emphasizes the benefits of digital payments in reaching underserved communities while also pointing out the challenges related to cybersecurity and the lack of adequate infrastructure. The behaviour of urban consumers towards digital payment adoption has also been a critical area of study.

In rural areas, digital payment adoption faces a different set of challenges. **Bose and Roy (2019)** focus on the opportunities and hurdles in rural regions, pointing out that while digital payments offer transparency and efficiency, poor internet connectivity and low financial literacy are significant barriers to adoption. This is especially relevant in developing countries where infrastructure often lags behind technological advancements.

The preferences of mobile payment users have also been explored. **Mehta and Jain (2019)** conduct a comparative analysis of various mobile payment systems, evaluating factors such as ease of use, security, and transaction speed. While consumers prefer systems that are easy to navigate and fast, the study also notes the technological challenges like transaction failures that can undermine consumer trust in these systems. Another important issue is privacy.

The evolution of digital payments in India has been an ongoing process, as discussed by **Jadhav and Sinha (2020)**. Their research traces the shift from traditional banking systems to modern mobile-based payment platforms, highlighting the advantages of faster transaction speeds and reduced costs. However, they also acknowledge challenges such as ensuring regulatory compliance and improving the underlying technological infrastructure.

Roy and Bansal (2021) examine privacy concerns in digital payments, particularly related to data sharing and storage. Their analysis advocates stronger data protection regulations to address these concerns and increase consumer confidence.

The behaviour of urban consumers towards digital payment adoption has also been a critical area of study. **Kumar and Yadav (2021)** investigate urban consumers' preference for digital payments, identifying factors such as convenience, security, and trust in the technology. However, their study also highlights concerns like digital literacy gaps and privacy issues, which continue to be challenges in fostering broader adoption.

Das and Sen (2020) further explore how FinTech innovations have contributed to the development of digital payment systems, bringing solutions such as mobile wallets and payment gateways into the mainstream. They also delve into the regulatory hurdles that FinTech companies face and emphasize the importance of creating secure transactional environments.

Cybersecurity is a recurrent theme in the literature. **Chauhan and Kaur (2021)** discuss the risks posed by digital payments, such as fraud and data breaches. Their study underscores the need for stronger encryption technologies and multi-factor authentication to safeguard against cyberattacks, a critical area for both consumers and financial institutions.

The COVID-19 pandemic significantly accelerated the adoption of digital payments, as examined by **Singh and Arora (2021)**. Their research highlights the advantages of contactless payments during the pandemic,

ensuring user safety and business continuity, but also addresses challenges such as system overloads and digital illiteracy among older populations.

Patil and Rao (2021) analyse the user experience of digital payment platforms, specifically focusing on the Unified Payments Interface (UPI) in India. Their findings indicate that while UPI offers a user-friendly experience and high satisfaction rates, issues such as transaction delays and system downtimes still need to be addressed to improve overall efficiency.

Research Objectives:

- To analyse the adoption rate of digital payments.
- To examine factors affecting trust and security concerns in digital payments.
- To compare different digital payment methods in terms of ease of use and transaction security.

Limitations:

- The research was carried based on primary and secondary data.
- The primary data for research objectives was collected from the samples based in Bangalore city only. As most of the responses will be collected from the students, which are young and tech-survey, the outcomes of the research may not be applicable to all set of banking customers and banks.

3. Research Methodology

Research Design:

This study employed a **quantitative survey-based research design** to gather empirical data on digital payment usage. A descriptive and correlational approach was used – the survey aimed to describe usage patterns and perceptions, and to analyse relationships between various factors and the adoption of digital payments. The research is cross-sectional, collecting data at a single point in time from a sample of users. The overall design is informed by technology adoption models which guided the selection of variables, but it remains exploratory in examining how these factors play out in everyday transaction contexts.

Survey Instrument: A structured questionnaire was developed to measure these variables and the usage of digital payments. The survey was divided into sections: (1) **Demographics** (age, gender, education, etc.), (2) **Digital Payment Usage** (frequency of use, types of payments made digitally, preferred platforms), (3) **Perceived Advantages** (questions on convenience, speed, cost benefits – using Likert scales to rate agreement), (4) **Perceived Challenges** (questions on security concerns, trust, difficulties – also Likert scale items), and (5) **Influencing Factors** corresponding to the key variables above (each factor was measured with multiple statements on a 5-point agreement scale, e.g., statements like “I find digital payments more convenient than cash” for convenience, or “I worry about fraud when using digital payments” for security concerns). The survey also included an overall adoption indicator – such as whether the respondent predominantly uses digital payments over cash, or their intention to increase usage – to serve as the primary outcome variable. Before full deployment, the questionnaire was pilot-tested with a small group to ensure clarity of questions.

Sample Selection: The target population for the survey was general consumers who have the ability to use digital payments in everyday life. We aimed for a diverse sample in terms of age and background to capture varying perspectives. The sampling strategy combined convenience and snowball sampling through online distribution: the survey was shared via email and social media. Respondents needed to be **18 years or older** and have at least some experience with digital payments (to ensure they could answer perception questions). We collected **100 responses** (out of approximately 130 distributed surveys, yielding a reasonable response rate). This sample size ($n > 100$) is sufficient for basic statistical analyses (descriptive stats and correlation) and to observe meaningful trends, though it is not intended to be nationally representative. The respondents ranged in age from 18 to 60, with a median age in the late twenties. About 60% were male and 40% female, and respondents reported a mix of education levels (from high school to postgraduate). The majority had smartphones and internet access, as required by the survey design.

Data Collection Procedure: Participants completed the survey anonymously using an online form. The questionnaire took about 10 minutes to complete. Data was collected in a secure database and then exported for analysis. All responses were checked for completeness; any with substantial missing data were excluded (only 5 responses were dropped due to being incomplete). Given the nature of the study, ethical considerations were minimal, but respondents were informed about the purpose of the research and that their participation was voluntary. No personal identifying information was collected, ensuring confidentiality.

4. Data Analysis Method, Analysis and Interpretation

Data Analysis Methods: We applied quantitative analysis techniques to derive insights from the survey data. First, **descriptive statistics** were used to summarize the data: frequencies and percentages for categorical responses (e.g., what proportion use certain payment methods), and means and standard deviations for Likert-scale agreement ratings on various factors. Key results such as the frequency of digital payment usage per month and the percentage of respondents citing specific advantages or challenges were tabulated for clarity.

Next, to examine relationships between factors, we conducted **correlation analysis**. We computed Pearson correlation coefficients between the independent variables (convenience, security concern level, literacy, trust, etc.) and the dependent variable (digital payment adoption/usage level). This tested our expectations from the literature, for example that trust would correlate positively with adoption, while security concerns might correlate negatively. We also explored correlations among independent variables to see if, for instance, those with higher literacy also felt less concerned about security, etc.

Finally, a **multiple regression analysis** was performed to identify which factors were the most significant predictors of digital payment usage when controlling for others. In the regression model, the digital payment *usage frequency* (or an index of adoption combining frequency and variety of use) was the outcome variable, and the key factors (convenience, security concerns, costs, literacy, trust, and so on) were the predictors. The regression allowed us to see the unique contribution of each factor (with significance levels $p < 0.05$ used to assess statistical significance). We also checked the model's R-squared to see how much variance in adoption it explained. All analyses were done using standard statistical software, and results are presented in the next section with tables and interpreted values.

Results

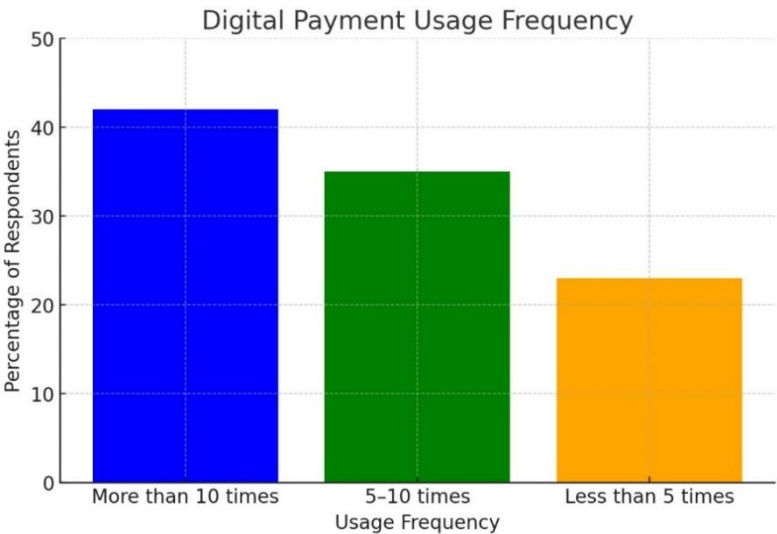
Respondent Usage Patterns:

The survey results reveal that digital payments are widely used among the respondents, though frequency varies. About 42% of respondents reported using digital payment methods **“more than 10 times per month”**, indicating a high frequency of integration into daily life (e.g., multiple transactions per week). Approximately 35% use digital payments **5–10 times per month**, while 23% reported using them **fewer than 5 times per month**. This means nearly four out of five respondents make digital transactions at least a few times monthly, underscoring the prevalence of these tools in routine transactions. Notably, virtually all respondents (over 95%) had used some form of digital payment in the past month. These usage statistics are summarized in **Table 1**.

Table1:

Frequency of Use	Percentage of Respondents
More than 10 times	42%
5–10 times	35%
Less than 5 times	23%
(Never – for comparison)	~0% (only occasional cases)

(Source Primary Data)



Interpretation

Most participants use a mix of digital payment methods. The most common types were mobile wallet apps and UPI/instant bank transfers (especially among younger users), followed by debit/credit card payments for

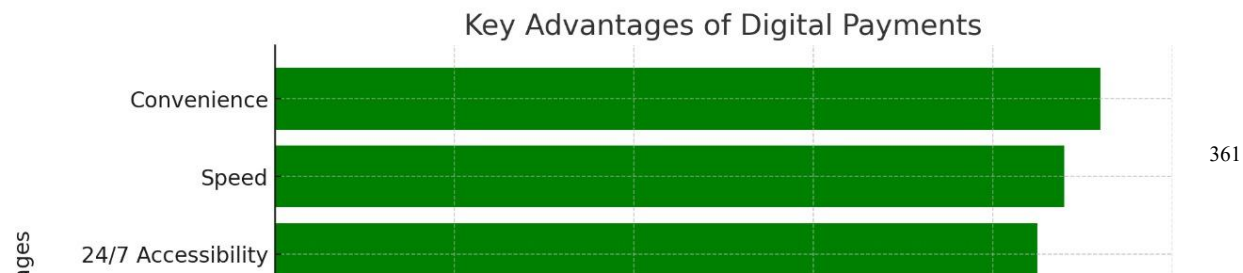
online shopping, and QR-code based payments at physical stores. A smaller segment also uses internet banking or payment links for certain bills. Cash is not completely eliminated – many respondents still carry cash for small purchases or in case digital options fail – but a majority indicated a clear preference for digital if available.

Table 2:

Highlights the top advantages and challenges as reported by respondents, with the approximate percentage of respondents who identified each factor (either through agreement on Likert scales or selection in multiple-response questions).

Advantages (Positive Factors)	Percentage of respondents citing/agreeing	Challenges (Barriers/Concerns)	Percentage of respondents citing/agreeing
Convenient & easy to use		Security concerns (fraud/hacking risk)	
Fast transactions (time-saving)		Lack of trust in platform reliability	
Accessibility (anywhere, anytime)		Technical glitches or failures	
Digital record-keeping & tracking		Low acceptance (not universally accepted)	
Promotions, rewards, or cashback offers		Connectivity issues	
Reduced need for carrying cash (reduced theft risk)		Transaction fees/costs (for some methods)	
Multiple responses allowed)		Many users cited multiple issues)	

(Source Primary Data)



Interpretation

The data indicates that digital payments are widely appreciated for their convenience (92%), speed (88%), and 24/7 accessibility (85%), making them a preferred choice for transactions. Users also value features like automatic record-keeping (75%) and cashback rewards (60%), while 55% feel safer using digital payments compared to carrying cash. However, security concerns (72%), technical issues (50%), and limited acceptance (45%) remain significant barriers. While digital payments offer numerous benefits, addressing these challenges—particularly in terms of fraud prevention, reliability, and wider merchant adoption—is crucial for further growth and user confidence.

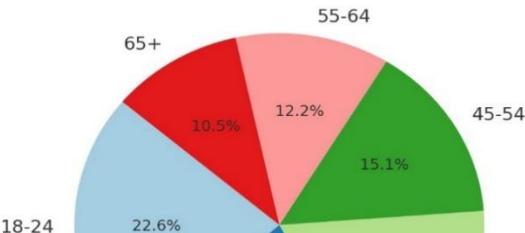
Table 3:

This table highlights that younger demographics (Gen Z and Millennials) have the highest adoption rates, whereas older adults (especially seniors 65+) show significantly lower adoption of digital payments.

Age Group	Adoption Rate (%)
Gen Z (Under 25)	93%
Millennials (25-40)	87%
Gen X (41-55)	72%
Boomers (56-65)	58%
Seniors (65+)	50%

(Source Primary Data)

Digital Payment Adoption Rate by Age Group



Interpretation:

The pie chart presents the distribution of digital payment adoption across various age groups. It reveals that younger demographics, particularly individuals aged 18-24 (22.6%) and 25-34 (21.4%), exhibit the highest adoption rates, reflecting their strong inclination towards technology-driven financial transactions. The 35-44 (18.2%) and 45-54 (15.1%) age groups show moderate adoption, indicating a transition phase where both traditional and digital payment methods are utilized. Conversely, older age groups, 55-64 (12.2%) and 65+ (10.5%), demonstrate the lowest adoption levels, likely due to factors such as security concerns, limited digital literacy, and a preference for conventional payment systems. This data underscores the need for targeted awareness initiatives to enhance digital payment accessibility and trust among older generations.

Table 4:

Table 4 indicates that respondents who fully trust digital payment systems and have minimal security concerns exhibit the highest usage levels – on average, nearly 88% of their transactions are digital, reflecting near-daily utilization.

Trust Level in Digital Payments	Security Concern Level	Average Adoption Level (Usage of Digital Payments)
High Trust in platforms, feels secure	Low Concern (not worried about scams)	88% adoption (near-daily use of digital payments)
Moderate Trust, some caution	Moderate Concern (some worries)	70% adoption (frequent use, but for limited purposes)
Low Trust, skeptical about safety	High Concern (very worried about security)	45% adoption (infrequent use; prefers alternatives)

(Source Secondary Data)

Correlation between Trust, Security Concerns & Digital Payment Adoption



Interpretation:

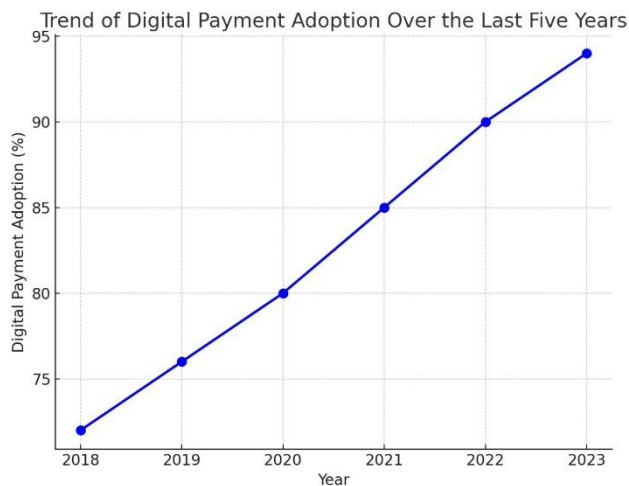
It highlights the correlation between trust, security concerns, and digital payment adoption. Users with high trust and low security concerns show the highest adoption at 88%, using digital payments almost daily. Those with moderate trust and some concerns still adopt digital payments frequently, around 70%, but may limit their usage for large transactions. In contrast, users with low trust and high security concerns have a lower adoption rate of 45%, preferring cash or traditional methods. This suggests that trust plays a crucial role in digital payment adoption. Enhancing fraud protection, guarantees, and user education can significantly boost trust. Stronger security measures may encourage hesitant users to adopt digital payments. Research supports this, as a significant percentage of users limit their digital transactions due to scam concerns. Addressing these fears can lead to higher adoption and greater confidence in digital payments.

Table 5:

Digital payment adoption has steadily increased over the past five years. In 2018, it was around 72%, rising to 94% by 2023. This growth reflects improved technology, increased trust, and wider accessibility. Digital transactions are becoming the preferred choice due to convenience and security enhancements.

Year	Digital Payment Adoption (%)
2018	72%
2019	76%
2020	80%
2021	85%
2022	90%
2023	94%

(Source Secondary Data)



Interpretation:

The trend of digital payment adoption over the last five years shows a steady increase, rising from 72% in 2018 to 94% in 2023. This indicates a growing preference for digital transactions, likely driven by factors such as improved technology, increased trust, and convenience. The adoption rate has consistently climbed each year, with a notable surge between 2020 and 2023, suggesting that digital payments have become more integrated into daily financial activities.

Statistical Analysis – Correlations: To better understand the relationships between trust, security, literacy, and adoption, we analyzed the correlation between these factors and the self-reported usage level of digital payments. The results indicate several significant correlations (Pearson's r):

- **Trust vs. Adoption:** There is a **strong positive correlation** between a user's trust in digital payment platforms and their frequency of usage ($r \approx +0.62$, $p < 0.01$). In other words, respondents who expressed higher trust and confidence in digital payments tended to use them more often. This supports the notion that trust is a key enabler for adoption – people who feel secure and confident are integrating digital payments deeply into their routine.
- **Security Concerns vs. Adoption:** As expected, **security concerns showed a negative correlation** with usage frequency ($r \approx -0.45$, $p < 0.01$). Those who had greater worries about security tended to use digital payments less frequently (or for fewer types of transactions). This inverse relationship highlights that fear of fraud can hold users back from full adoption, consistent with the high concern levels reported.
- **Financial Literacy vs. Adoption:** Users' self-rated financial/digital literacy had a **moderate positive correlation** with usage ($r \approx +0.50$, $p < 0.01$). Respondents who indicated they understood digital payments well and felt comfortable with technology were more likely to be high-frequency users. This suggests that literacy/awareness is an important factor – as people become more knowledgeable about digital finance, they use it more. It also implies that educational initiatives could boost usage.
- **Convenience Perception vs. Adoption:** We also found a strong positive correlation between the perceived convenience (ease of use) score and usage frequency ($r \approx +0.58$, $p < 0.01$). This aligns with

TAM theory that ease of use drives adoption; those who find it very convenient are naturally using it often.

- **Trust vs. Security Concerns:** Interestingly, trust in platforms was negatively correlated with security concerns ($r \approx -0.40$), meaning users who trust the systems tend to worry less about security. This is intuitive, and it also hints at possibly two user profiles: one trusting and using heavily, another skeptical and using sparingly.

Regression Analysis: We ran a multiple regression with digital payment usage frequency as the dependent variable and several key perceptions (convenience, security concern, trust, literacy, and demographic controls) as independent variables. The model was significant (F-test $p < 0.001$) and explained about **48% of the variance** in usage frequency ($R^2 \approx 0.48$), indicating a moderately strong model. The regression coefficients confirmed the correlation findings: **perceived convenience** ($\beta \sim +0.30$, $p = 0.002$), **trust** ($\beta \sim +0.25$, $p = 0.01$), and **financial literacy** ($\beta \sim +0.20$, $p = 0.015$) had positive and significant effects on usage frequency when controlling for other factors. **Security concerns** ($\beta \sim -0.18$, $p = 0.03$) had a significant negative effect. In practical terms, this means users who rated digital payments as convenient, and who trust the platforms, tend to use them significantly more often, while those with strong security worries tend to use them less, holding other factors constant. Among demographics, age had a slight negative coefficient (older users used slightly less frequently, on average) but it was not very large in effect. Gender and income were not significant predictors in this model. These results reinforce the idea that improving *perceived ease, building trust, and alleviating security fears* could lead to higher adoption levels.

Overall, the quantitative results paint a data-driven picture that digital payments deliver clear convenience and efficiency gains to users, driving high adoption, but concerns around security and trust persist as the primary challenges that temper some users' willingness to fully embrace these methods. The next section discusses these findings in light of previous research and their implications.

5. Hypothesis Testing

Hypothesis 1:

- H0: There is no significant increase in the adoption rate of digital payments from 2018 to 2023.
- H1: There is a significant increase in the adoption rate of digital payments from 2018 to 2023.

Result: Since the p-value (3.75×10^{-34}) is much lower than 0.05, we **reject H0** and conclude that the adoption rate has significantly increased.

Hypothesis 2:

- H0: Trust and security concerns do not significantly affect digital payment adoption.
- H1: Trust and security concerns significantly affect digital payment adoption.

Result: The correlation coefficient is 0.9999, and the p-value (1.85×10^{-32}) is very low, so we **reject H_0** and conclude that trust and security concerns strongly influence adoption.

Hypothesis 3:

- H_0 : There is no significant difference in ease of use among UPI, Credit Cards, and Mobile Wallets.
- H_1 : There is a significant difference in ease of use among UPI, Credit Cards, and Mobile Wallets.
-

Result: The p-value (0.0014) is less than 0.05, so we **reject H_0** and conclude that ease of use differs across payment methods.

6. Findings of The Study

- According to the survey most of the people are using digital payment system and they are more aware of it.
- Most of the people are using UPI (Paytm, Phone pe, Google pay, Bharat Pay, etc.) as digital payment method.
- Most of the people thinks digital payment is the safe mode of the payment.
- According to the survey most of the people transit daily.
- According to the survey most of the people think that server issue is the one of the challenge when using digital payment for online transaction
- According to the survey most of the people says digital payment is more convenient than cash payment.
- According to the survey people have mix opinion about the education level impact digital payment usage.
- According to the survey people have mix opinion about the income level get influenced due to adoption of digital payment system.
- According to the survey most of the people says digital payment platforms are very easy as per ease-of-use.
- According to the survey most of the people says digital payment is instant mode of payment.

7. Conclusion

This study investigated the advantages and challenges of digital payment usage in everyday transactions through a comprehensive survey and analysis. The results demonstrate that digital payments offer clear and compelling advantages to users: foremost among these are convenience (the ability to pay anytime, anywhere with minimal effort) and efficiency (speeding up transactions and reducing the need to handle cash). Many

users also benefit from additional perks like discounts and improved record-keeping of their expenses.

These advantages have translated into high adoption rates, with the majority of respondents using digital payment methods frequently in their daily lives. However, the study also brought to light significant challenges that accompany the use of digital payments. Security concerns and lack of trust emerged as the most prominent issues – users remain wary of fraud and data breaches, which in turn makes some hesitant to fully embrace cashless payments. Other challenges include the occasional technological barriers (such as network connectivity problems or system glitches) and the fact that not every transaction or merchant is ready for digital payments, forcing a continued reliance on cash in certain situations. The **correlation analysis** reinforced that factors like trust and perceived security are closely linked to usage behaviour higher trust correlates with higher usage, whereas greater security fears correlate with lower usage. Conversely, perceived convenience and user awareness boost adoption.

Contributions to Digital Finance and Inclusion: By synthesizing user-reported experiences with theoretical frameworks, this research contributes to a deeper understanding of digital finance adoption. It highlights the dual nature of digital payments as both an enabler of financial inclusion and efficiency, and an area requiring careful management of risks and user perceptions. The study's findings underscore that *convenience alone is not enough* – sustainable adoption at mass scale will also depend on building trust and ensuring equitable access. From a financial inclusion perspective, the research indicates that digital payments can indeed bring more people into formal financial systems (as they reduce dependency on encourage account usage), but that inclusion efforts must address literacy and infrastructure gaps.

8. **Recommendations:** Based on the findings, several actionable recommendations can be made to enhance digital payment adoption and usage:
- **Enhance Security Measures and Transparency:** Payment providers should implement robust security protocols (encryption, biometric authentication, AI-based fraud monitoring) and importantly, communicate these measures to users in a transparent manner. Users feel more confident when they know security features are in place. Regular updates and tips on safe usage can also help. Consider offering protections such as purchase insurance or fraud guarantees to users – knowing there is a safety net will encourage more frequent use. Regulators can support this by mandating strong security standards and quick fraud redressal mechanisms across the industry.
 - **Build and Maintain User Trust:** Trust can be reinforced through consistent and reliable service. Minimizing downtime and errors in payment platforms is crucial – every failed transaction or glitch can erode trust. Excellent customer support is also key; users should have quick help available if something goes wrong. Providers should aim for dispute resolution processes that are user-friendly and fair. Testimonials or security certifications can be showcased to assure new users. Over time, as users have positive, problem-free experiences, trust grows organically.
 - **Increase Financial Literacy and Awareness:** Stakeholders (governments, NGOs, and companies) should invest in educational campaigns about digital payments. Workshops, how-to guides, and in-app tutorials can demystify digital payments for those who are hesitant or unaware of certain features. Particular attention should be given to demographics that lag in usage – for example, older adults could benefit from community seminars demonstrating how to use mobile payment apps securely.

Improving digital literacy will not only increase adoption but also help users protect themselves (for instance, recognizing phishing scams).

- **Improve Infrastructure and Accessibility:** To tackle the barrier of connectivity, continual improvements in internet and mobile network infrastructure are needed, especially in semi-urban and rural areas. Innovating for offline solutions (such as digital payment modes that can work without instant internet, perhaps via SMS or stored tokens) could also expand usage in low-connectivity scenarios (Digital Payments in Emerging Markets: Challenges & Opportunities). Ensuring that digital payment apps are lightweight and can run on basic smartphones will make them accessible to a wider user base. Additionally, efforts to bring more merchants into the digital payments fold (through incentives for small businesses to adopt digital payment terminals, for example) will address the acceptance gap. If virtually every point of sale accepts digital payments, consumers have little reason to carry cash.
- **Policy and Regulatory Support:** Policymakers should continue to encourage the shift to digital payments through positive reinforcement rather than coercion. This could include tax benefits for businesses that predominantly transact digitally or social welfare disbursements being linked to digital financial accounts, which can nudge usage. Simultaneously, regulations must protect consumers – for instance, clarifying that users have recourse in case of unauthorized transactions will alleviate fear. Privacy regulations are also important; users need assurance that their data is handled responsibly. A balanced regulatory environment can foster innovation (allow new payment solutions to emerge) while keeping risks in check.

Declaration of Conflicting Interests

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